 0030-0950/84/0001-0062 $1.00/0

BRIEF NOTE

SURVEY OF OHIO STATE UNIVERSITY STUDENTS' ATTITUDES ON WILDLIFE AND CONSERVATION ISSUES[1]

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OHIO J. SCI. 84 (1): 62-65, 1984

Interest in the aesthetic and recreational aspects of our environment has become more pronounced in our society. This heightened awareness of our surroundings and its wildlife inhabitants appears to have influenced the public's concern for the welfare of the environment. What are these concerns and to what extent are they present? The answers to this question could have far-reaching applications. The opinions of the general public carry substantial weight in many aspects of environmental and wildlife management. It is appropriate, therefore, to find some method to measure these attitudes. One method is the use of a public opinion survey. Kellert (1979) conducted a nationwide survey on wildlife and natural habitat issues. My paper analyzes a study that was initiated to survey Ohio State University students, in Columbus, Ohio, using some of Kellert's questions and to obtain answers to questions posed by some local conservation-oriented organizations.

The survey, conducted on the Ohio State University's Columbus campus during the autumn of 1982, contained 17 questions. The first 6 related to demographic information, such as sex, race, age, major field of study, hometown location, population and site of residence. The remaining 11 questions were divided between 2 major topics, 5 questions pertained to zoos and 6 dealt with conservation and environmental issues. Of the 11 questions, 9 were developed from issues that are of importance to local conservation organizations, while 2 questions were replicated from Kellert's (1979) study. People being surveyed read the questions themselves. This method gave them more time to answer, and perhaps increased understanding and decreased bias by providing more privacy.

The actual survey took place between 26 October and 17 November 1982. The questionnaire was administered at different times during the day and at various locations around the Ohio State University campus. Students were approached with a uniform introduction and asked to complete the questionnaire by marking only one response for each question.

A total of 150 individuals responded, but in the final analysis, 8 questionnaires

[1]Manuscript received 21 March 1983 and in revised form 14 July 1983 (#83-11).

had to be discarded because they were incorrectly or not fully completed. Similar majors of study were combined into broader categories to facilitate analysis. For example, accounting majors were placed in category 2, under administrative sciences. Major areas of study for the 142 students surveyed were equally divided among administrative, agriculture, social/behavioral and math/physical sciences (approximately 21% each). About 11% were in the arts and the remainder were undecided (5%). Using Chi-square ($p < 0.05$) with the Yates correction term, individual questions were tested to determine if students majoring in unrelated areas were inclined to answer the questions differently. Areas of study did not influence the responses. Frequency counts and Pearson's coefficient of correlation were also used to analyze the data. Copies of the questionnaire are available from the author.

The sex ratio of males to females surveyed was 1:1. Most of the respondents were Caucasian (88.7%) and their mean age was 20.6 years. The hometown population mean was 277,000.

Almost all of those surveyed (98.6%) had been to a zoo at some point in their lives. There was a strong consensus of opinion (91.5%) that it was preferable to view animals in their natural habitat, as opposed to the traditional zoo-park setting. Most (97.9%) felt that it was important to provide natural conditions for the zoo animals. The majority (63.4%) suggested that funding to provide these natural conditions should come from an increase in the entrance fee. Others (20.4%) favored raising the additional income through an increase in sales, property or income tax and 14.1% marked the "other" option, suggesting government funding, private donations and fund-raising drives as possibilities. Of those questioned, 98.5% agreed that zoos are useful for protecting endangered species.

In responding to a question concerning the major reason for the endangerment and extinction of species, the majority of the students surveyed were almost equally divided between 2 of the 5 reasons listed. Loss of wilderness caused by natural resource extraction (33.8%) and habitat destruction due to human overpopulation (33.1%) were believed to be the most important. Respondents were concerned with the preservation of natural habitats. A majority (55.0%) disagreed with the statement that natural resources, for example coal and oil, must be developed even at the expense of wildlife populations. Similarly, a high percentage (88.8%) were willing to pay higher lumber prices if trees were cut in ways that were beneficial to wildlife. There was also a willingness, by those being surveyed, to pay higher electric bills if it resulted in cleaner air (76.8%) and 92.3% were willing to lower their thermostats to conserve energy. The main motivation (76.8%) for visiting a natural area was the desire to relax and get away.

Twelve significant correlations between survey questions were found. A matrix of the "r" values is presented in table 1.

Analysis of the significant correlation coefficients ($p < 0.05$) showed several relationships between race and the environment-related questions. Of the students surveyed, Blacks were more likely to agree that natural resources must be developed even if it resulted in reduced wildlife populations. They would not be as willing to pay higher electric bills in return for cleaner air, and Blacks negatively responded to the question of lowering their thermostats to conserve energy. They also preferred to view animals in a zoo-park setting.

People who agreed to lower their thermostats to conserve energy were also willing to pay higher electric and lumber prices if it led to further preservation of clean air and wildlife. Those who responded affirmatively to the question of cutting trees in ways that help wildlife tended to respond negatively when asked if natural resources must be developed re-

TABLE 1

Matrix of statistically significant correlations from a student conservation attitude survey, Ohio State University, Columbus, 1982.

Race	Hometown Population	Viewing Preference	Cutting Trees	Developing Resources	Increasing Electric	Lowering Thermostats
Race	0.19*	0.21*	0.13	−0.19*	0.23*	0.40**
Hometown Population		0.08	0.04	−0.07	−0.03	0.08
Viewing Preference			0.35**	−0.06	0.25**	0.39**
Cutting Trees				−0.21*	0.36**	0.24**
Developing Resources					−0.14	−0.05
Increasing Electric						0.28**
Lowering Thermostats						

*Indicates significance at $p < 0.05$
**Indicates significance at $p < 0.01$
Total sample = 142.

gardless of possible damage to wildlife populations.

A correlation existed between Blacks and the location of their hometown residence within the city limits ($r = -0.21$). While this relationship is valid, other factors limited further use of the city limits statistic, and it is not included in the table 1 matrix. The statistic of the location of hometown residence, whether within or outside of the city limits, was intended to provide information about the environment in which the person matured. However, in this mobile age, many of those surveyed had difficulty in "choosing" a hometown as a result of frequent relocations during childhood. In addition, the rural impression of residing outside of the city limits is not necessarily accurate. Without more extensive research it would be incorrect to make assumptions on the affects of exact residence location.

Several of the demographic aspects of this survey deserve further consideration. The correlation between the Black race and the expressed preference for viewing animals in a traditional zoo-park setting may be influenced by the population size of the hometown of those respondents. People reared in larger cities may have had fewer opportunities to view wildlife in its natural habitat. Washburne and Wall (1980) reported that transportation difficulties may be a factor in the lower participation rates among Blacks in wildland-related activities. Of the people who marked a preference for the zoo-park setting, 58.3% had a hometown population of >100,000, while this population category of >100,000 constituted only 41.5% of the total surveyed population. The relationship between hometown and viewing preference was not significantly correlated. Economic conditions could also be investigated as a possible contributing factor.

Another group of significant correlations related the preference for viewing animals in their natural habitat with a willingness to sacrifice something, be it monetary or personal comfort, for the continuance of that natural habitat. Those responding to this survey who liked to see animals in a natural environment were correspondingly more agreeable to paying increased lumber prices and increased electric bills if it contributed to the preservation of the environment. They were also more agreeable to lowering their thermostats to conserve energy.

The results of this survey do not show any difference in the response as a result of sex or major field of study. Further research, such as the study conducted by Kellert and Berry (1980) on the basic attitudes toward animals in American society would be valuable.

The limited sample group did demonstrate an apparent concern for the future of our environment and the welfare of wildlife. A high percentage of those surveyed expressed a desire for natural conditions in zoos and a willingness to pay for the conservation of our surroundings. However, there was a realization by some that the development of natural resources is necessary, as 45.1% agreed that natural resources must be developed even at the expense of wildlife.

ACKNOWLEDGMENTS. I would like to thank T. J. Peterle, Department of Zoology, The Ohio State University, for his helpful suggestions during this project. I am also grateful to T. E. Bihari for his assistance with the computer program.

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